



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number:** 18744

**TO: Ralph J Gitomer**  
**Location: rem/3D65/3C18**  
**Art Unit: 1655**  
**Friday, May 12, 2006**

**Case Serial Number: 10/764455**

**From: Mary Jane Ruhl**  
**Location: Biotech-Chem Library**  
**Remsen 1-A-62**  
**Phone: 571-272-2524**

**maryjane.ruhl@uspto.gov**

### **Search Notes**

Examiner Gitomer,

Here are the results for your recent search request.

Please feel free to contact me if you have any questions about these results.

Thank you for using STIC services. We appreciate the opportunity to serve you.

Sincerely,

Mary Jane Ruhl  
Technical Information Specialist  
STIC  
Remsen 1-A-62  
Ext. 22524

=> d his ful

(FILE 'HOME' ENTERED AT 12:05:46 ON 12 MAY 2006)

FILE 'HCAPLUS' ENTERED AT 12:06:26 ON 12 MAY 2006

E EBINUMA HIROYUKI/AU  
L1 19 SEA ABB=ON "EBINUMA HIROYUKI"/AU  
E YUKI KUMIKO/AU  
L2 5 SEA ABB=ON "YUKI KUMIKO"/AU  
L3 2 SEA ABB=ON L1 AND L2  
L4 ANALYZE L3 2-2 CT : 8 TERMS

FILE 'REGISTRY' ENTERED AT 12:20:54 ON 12 MAY 2006

L5 0 SEA ABB=ON TETRAZOLIUM SALTS/CN  
E TETRAZOLIUM/CN  
L6 1 SEA ABB=ON ALBUMINS/CN

FILE 'HCAPLUS' ENTERED AT 12:22:18 ON 12 MAY 2006

L7 173033 SEA ABB=ON (L6 OR ?ALBUMIN?)  
L8 739 SEA ABB=ON L7 AND (?ELECTRON?(W)?ACCEPT? OR NAD OR NADP)  
L9 378 SEA ABB=ON L8 AND ?ENZYME?  
L10 6 SEA ABB=ON L9 AND ?DEHYDROGENATION?  
L11 282 SEA ABB=ON L9 AND ?HYDROGEN?  
L12 282 SEA ABB=ON L10 OR L11  
L13 3 SEA ABB=ON L12 AND ?COLOR?(W) (?FORM? OR ?DEVELOP?)  
L14 171 SEA ABB=ON L12 AND (?HUMAN? OR MAN OR ?BOVINE? OR COW?)  
L15 2 SEA ABB=ON L14 AND ?TETRAZOLIUM?(W)?SALT?  
L16 9 SEA ABB=ON L10 OR L13 OR L15  
L17 9 SEA ABB=ON L16 AND (PRD<20040127 OR PD<20040127) *9 citations from CA Plus*

FILE 'MEDLINE, BIOSIS, EMBASE, JAPIO, JICST-EPLUS' ENTERED AT 12:25:55 ON 12 MAY 2006

L18 12 SEA ABB=ON L16  
L19 6 DUP REMOV L18 (6 DUPLICATES REMOVED) *6 citations from*

FILE 'USPATFULL' ENTERED AT 12:33:38 ON 12 MAY 2006

L20 633 SEA ABB=ON L16 AND (PRD<20040127 OR PD<20040127)  
L21 558 SEA ABB=ON L20 AND (NAD OR NADP)  
L22 100 SEA ABB=ON L21 AND ?DEHYDROGENAT?  
L23 15 SEA ABB=ON L22 AND ?COLOR?(W) (?FORM? OR ?DEVELOP?) *15 citations from USPatfull*

FILE HOME

FILE HCAPLUS

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FILE COVERS 1907 - 12 May 2006 VOL 144 ISS 21  
FILE LAST UPDATED: 11 May 2006 (20060511/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

#### FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 11 MAY 2006 HIGHEST RN 883943-03-1  
DICTIONARY FILE UPDATES: 11 MAY 2006 HIGHEST RN 883943-03-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

#### FILE MEDLINE

FILE LAST UPDATED: 11 MAY 2006 (20060511/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).  
See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)  
[http://www.nlm.nih.gov/pubs/techbull/nd05/nd05\\_med\\_data\\_changes.html](http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html)  
[http://www.nlm.nih.gov/pubs/techbull/nd05/nd05\\_2006\\_MeSH.html](http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html)

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

#### FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 10 May 2006 (20060510/ED)

FILE EMBASE

FILE COVERS 1974 TO 12 May 2006 (20060512/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default)  
and biweekly.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

FILE JAPIO

FILE LAST UPDATED: 3 APR 2006 <20060403/UP>

FILE COVERS APRIL 1973 TO DECEMBER 22, 2005

>>> GRAPHIC IMAGES AVAILABLE <<<

>>> NEW IPC8 DATA AND FUNCTIONALITY NOT YET AVAILABLE IN THIS FILE.  
USE IPC7 FORMAT FOR SEARCHING THE IPC. WATCH THIS SPACE FOR FURTHER  
DEVELOPMENTS AND SEE OUR NEWS SECTION FOR FURTHER INFORMATION  
ABOUT THE IPC REFORM <<<

FILE JICST-EPLUS

FILE COVERS 1985 TO 1 MAY 2006 (20060501/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED  
TERM (/CT) THESAURUS RELOAD.

FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 11 May 2006 (20060511/PD)

FILE LAST UPDATED: 11 May 2006 (20060511/ED)

HIGHEST GRANTED PATENT NUMBER: US7043760

HIGHEST APPLICATION PUBLICATION NUMBER: US2006101551

CA INDEXING IS CURRENT THROUGH 11 May 2006 (20060511/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 11 May 2006 (20060511/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006

=&gt; d ibib abs ind l3 2-2

L3 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:159722 HCAPLUS  
DOCUMENT NUMBER: 140:195862  
TITLE: Method and reagent for quantitating specific component  
in biological sample by dehydrogenase  
INVENTOR(S): Ebinuma, Hiroyuki; Yuki, Kumiko  
PATENT ASSIGNEE(S): Daiichi Pure Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004061263	A2	20040226	JP 2002-219222	20020729
PRIORITY APPLN. INFO.:			JP 2002-219222	20020729
AB	A method and a reagent are provided for accurately quantitating an objective specific component in a biol. sample containing Hb by effectively avoiding the influence by Hb upon reacting in the presence of an electron acceptor an enzyme possessing the oxidation ability by dehydrogenation to the specific component or a substance derived from the specific component with the biol. sample containing Hb and measuring the reduced form of the electron acceptor generated (e.g., NADH, NADPH). The reagent for this method contains albumin, preferably, albumin derived from human or bovine.			
IC	ICM G01N033-52 ICS C12Q001-32; G01N021-78; G01N033-66			
CC	9-2 (Biochemical Methods)			
ST	enzymic analysis dehydrogenase Hb albumin			
IT	Blood analysis Color formers Electron acceptors Human UV and visible spectroscopy (method and reagent for quantitating specific component in biol. sample by dehydrogenase)			
IT	Hemoglobins RL: ARU (Analytical role, unclassified); ANST (Analytical study) (method and reagent for quantitating specific component in biol. sample by dehydrogenase)			
IT	Albumins, analysis RL: ARU (Analytical role, unclassified); ANST (Analytical study) (serum, human, bovine; method and reagent for quantitating specific component in biol. sample by dehydrogenase)			
IT	Onium compounds RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (tetrazolium, salts; method and reagent for quantitating specific component in biol. sample by dehydrogenase)			
IT	107269-57-8, Aldopyranose dehydrogenase RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (aldohexose dehydrogenase; method and reagent for quantitating specific component in biol. sample by dehydrogenase)			
IT	3458-28-4, D-Mannose RL: ANT (Analyte); ANST (Analytical study) (method and reagent for quantitating specific component in biol. sample by dehydrogenase)			
IT	53-57-6, NADPH 58-68-4, NADH			

RL: ANT (Analyte); CPS (Chemical process); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)  
(method and reagent for quantitating specific component in biol. sample by dehydrogenase)

IT 9035-82-9, Dehydrogenase 37340-89-9, Diaphorase 150849-52-8, WST-1  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
(method and reagent for quantitating specific component in biol. sample by dehydrogenase)

□

=> analyze l3 2-2 ct

L4 ANALYZE L3 2-2 CT : 8 TERMS

=> d

L4 ANALYZE L3 2-2 CT : 8 TERMS

TERM #	# OCC	# DOC	% DOC	CT
1	1	1	100.00	ALBUMINS, ANALYSIS
2	1	1	100.00	BLOOD ANALYSIS
3	1	1	100.00	COLOR FORMERS
4	1	1	100.00	ELECTRON ACCEPTORS
5	1	1	100.00	HEMOGLOBINS
6	1	1	100.00	HUMAN
7	1	1	100.00	ONIUM COMPOUNDS
8	1	1	100.00	UV AND VISIBLE SPECTROSCOPY

\*\*\*\*\* END OF L4 \*\*\*

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=> d que stat 117

L6 1 SEA FILE=REGISTRY ABB=ON ALBUMINS/CN  
L7 173033 SEA FILE=HCAPLUS ABB=ON (L6 OR ?ALBUMIN?)  
L8 739 SEA FILE=HCAPLUS ABB=ON L7 AND (?ELECTRON?(W)?ACCEPT? OR NAD  
OR NADP)  
L9 378 SEA FILE=HCAPLUS ABB=ON L8 AND ?ENZYME?  
L10 6 SEA FILE=HCAPLUS ABB=ON L9 AND ?DEHYDROGENATION?  
L11 282 SEA FILE=HCAPLUS ABB=ON L9 AND ?HYDROGEN?  
L12 282 SEA FILE=HCAPLUS ABB=ON L10 OR L11  
L13 3 SEA FILE=HCAPLUS ABB=ON L12 AND ?COLOR?(W) (?FORM? OR ?DEVELOP?  
)  
L14 171 SEA FILE=HCAPLUS ABB=ON L12 AND (?HUMAN? OR MAN OR ?BOVINE?  
OR COW?)  
L15 2 SEA FILE=HCAPLUS ABB=ON L14 AND ?TETRAZOLIUM?(W)?SALT?  
L16 9 SEA FILE=HCAPLUS ABB=ON L10 OR L13 OR L15  
L17 9 SEA FILE=HCAPLUS ABB=ON L16 AND (PRD<20040127 OR PD<20040127)

=> d ibib abs 117 1-9

L17 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:159722 HCAPLUS  
DOCUMENT NUMBER: 140:195862  
TITLE: Method and reagent for quantitating specific component  
in biological sample by dehydrogenase  
INVENTOR(S): Ebinuma, Hiroyuki; Yuki, Kumiko  
PATENT ASSIGNEE(S): Daiichi Pure Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004061263	A2	20040226	JP 2002-219222	20020729 <--
PRIORITY APPLN. INFO.:			JP 2002-219222	20020729 <--

AB A method and a reagent are provided for accurately quantitating an objective specific component in a biol. sample containing Hb by effectively avoiding the influence by Hb upon reacting in the presence of an electron acceptor an enzyme possessing the oxidation ability by dehydrogenation to the specific component or a substance derived from the specific component with the biol. sample containing Hb and measuring the reduced form of the electron acceptor generated (e.g., NADH, NADPH). The reagent for this method contains albumin, preferably, albumin derived from human or bovine.

L17 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1995:732735 HCAPLUS  
DOCUMENT NUMBER: 123:163790  
TITLE: Short-chain 3-hydroxy-2-methylacyl-CoA dehydrogenase  
from rat liver: purification and characterization of a  
novel enzyme of isoleucine metabolism  
AUTHOR(S): Luo, Ming Jiang; Mao, Li-Feng; Schulz, Horst  
CORPORATE SOURCE: Dep. Chem., City Coll. City Univ. New York, New York,  
NY, 10031, USA  
SOURCE: Archives of Biochemistry and Biophysics (1995  
, 321(1), 214-20  
CODEN: ABBIA4; ISSN: 0003-9861

PUBLISHER: Academic  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Short-chain L-3-hydroxy-2-methylacyl-CoA dehydrogenase (SC-HMAD), a soluble mitochondrial enzyme, was purified 6000-fold from rat liver in 6% yield by a six-step purification procedure. The purified enzyme was homogeneous as judged by gel electrophoresis in the presence of SDS. The mol. mass of this protein was estimated to be 28 kDa under denaturing conditions. Under nondenaturing conditions, the enzyme behaved on Sephacryl S-200 like serum albumin with a mol. mass of 66 kDa. Thus, SC-HMAD seems to be a dimer composed of two, most likely identical 28-kDa subunits. Immunoblotting with antibodies to pig heart L-3-hydroxyacyl-CoA dehydrogenase (HAD) (EC 1.1.1.35) revealed that SC-HMAD and HAD are immunol. unrelated proteins. SC-HMAD, but not HAD, catalyzes the NAD<sup>+</sup>-dependent dehydrogenation of L-3-hydroxy-2-methylbutyryl-CoA, a metabolite of isoleucine, to 2-methylacetoacetyl-CoA. Relative activities with 3-hydroxy-2-methylacyl-CoA thioesters having acyl chains with 4, 5, 10, and 16 carbon atoms are 88, 100, 16, and 0%, resp. Unbranched 3-hydroxyacyl-CoA thioesters are also substrates of SC-HMAD, although poorer ones as evidenced by apparent *K<sub>m</sub>* values of 5 and 19  $\mu$ M for L-3-hydroxy-2-methylbutyryl-CoA and L-3-hydroxybutyryl-CoA, resp. Maximal velocities observed with these two substrates were similar. It is concluded that SC-HMAD catalyzes the second dehydrogenation step during the  $\beta$ -oxidation of the isoleucine metabolite 2-methylbutyryl-CoA. This enzyme may also be involved in the  $\beta$ -oxidation of natural and xenobiotic branched chain carboxylic acids.

L17 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:404853 HCAPLUS

DOCUMENT NUMBER: 115:4853

TITLE: Coenzyme F420 dependent N5,N10-methylenetetrahydromethanopterin dehydrogenase in methanol grown *Methanosarcina barkeri*

AUTHOR(S): Enssle, M.; Zirngibl, C.; Linder, D.; Thauer, R. K.  
CORPORATE SOURCE: Fachbereich Biol., Philipps-Univ., Marburg, W-3550, Germany

SOURCE: Archives of Microbiology (1991), 155(5), 483-90

CODEN: AMICCW; ISSN: 0302-8933

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The dehydrogenation of N5,N10-methylenetetrahydromethanopterin (I) to N5,N10-methenyltetrahydromethanopterin is an intermediate step in the oxidation of MeOH to CO<sub>2</sub> in *M. barkeri*. The reaction is catalyzed by I dehydrogenase, which is specific for coenzyme F420 as electron acceptor; neither NAD, NADP, nor viologen dyes could substitute for the 5-deazaflavin. The dehydrogenase was anaerobically purified almost 90-fold to apparent homogeneity in a 32% yield by anion exchange chromatog. on DEAE Sepharose and Mono Q HR and by affinity chromatog. on Blue Sepharose. SDS-PAGE revealed only 1 protein band with an apparent mass of 31 kDa. The apparent mol. mass of the native enzyme determined by polyacrylamide gradient gel electrophoresis was 240 kDa. The UV/visible spectrum of the purified enzyme was almost identical to that of albumin, suggesting the absence of a chromophoric prosthetic group. Reciprocal plots of the enzyme activity vs. the substrate concns. were linear: the apparent *K<sub>m</sub>* for I and for coenzyme F420 were 6  $\mu$ M and 25  $\mu$ M, resp. *V<sub>max</sub>* was 4000  $\mu$ mol/min-mg protein (*k<sub>cat</sub>* = 2066/s) at pH 6 (the pH optimum) and 37°. The Arrhenius activation energy



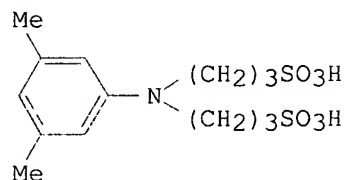
was 40 kJ/mol. The N-terminal amino acid sequence was 50% identical with that of the F420-dependent I dehydrogenase isolated from H<sub>2</sub>/CO<sub>2</sub> grown *Methanobacterium thermoautotrophicum*.

L17 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:194925 HCAPLUS  
 DOCUMENT NUMBER: 112:194925  
 TITLE: Enzymic method and kit for the determination of NAD(P)H and serum analytes, and preparation of chromogens for the method  
 INVENTOR(S): Aoyama, Norihito; Tatano, Toshio; Miike, Akira  
 PATENT ASSIGNEE(S): Kyowa Medex Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 17 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 342984	A2	19891123	EP 1989-305054	19890518 <--
EP 342984	A3	19920311		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 02049600	A2	19900219	JP 1989-123050	19890517 <--
PRIORITY APPLN. INFO.:			JP 1988-121458	A 19880518 <--
OTHER SOURCE(S):	MARPAT	112:194925		

GI



AB The invention provides a method and kit for the determination of NAD(P)H in a sample, e.g. a clin. sample, which comprises reducing pyruvic acid or a salt thereof with NAD(P)H in the presence of lactate dehydrogenase to form lactic acid, oxidizing the lactic acid in the presence of lactate oxidase to form H<sub>2</sub>O<sub>2</sub>, and determining the H<sub>2</sub>O<sub>2</sub> by reaction with peroxidase in the presence of a chromogen unsusceptible to NAD(P)H. The method is especially useful in determination of analytes, e.g. bile acid or phosphohexose isomerase (PHI), in serum containing lactic acid, in which case the sample is initially reacted with lactate oxidase to convert the lactic acid to pyruvic acid and H<sub>2</sub>O<sub>2</sub>, which is then decomposed, the pyruvic acid produced in that case providing at least a proportion of the pyruvic acid which is subsequently converted back to lactic acid. A variety of aryl compds. useful as chromogens in the above method are also prepared or provided. Thus, 50-400 IU PHI/L was determined with a 1st reagent (pH 7.5) containing NaH<sub>2</sub>PO<sub>4</sub>, Triton X-100, MgCl<sub>2</sub>, peroxidase, lactate dehydrogenase, glucose-6-phosphate dehydrogenase, lactate oxidase, pyruvic acid, NAD, and I; and a 2nd reagent (pH 7.5) containing NaH<sub>2</sub>PO<sub>4</sub>, Triton X-100, 4-aminoantipyrine, and

fructose-6-phosphate. A calibration curve for the determination is shown.

L17 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:609691 HCAPLUS  
DOCUMENT NUMBER: 109:209691  
TITLE: Continuous fermentative manufacture of levo-rotatory mandelic acid  
INVENTOR(S): Yamazaki, Yukinae; Maeda, Hidekatsu; Suzuki, Hideo  
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63087986	A2	19880419	JP 1986-232842	19860930 <--
JP 03062393	B4	19910925		

PRIORITY APPLN. INFO.: JP 1986-232842 19860930 <--

OTHER SOURCE(S): CASREACT 109:209691

AB Levo-rotatory mandelic acid (I) is manufactured continuously by ultrafiltration of a substrate solution containing benzoylformic acid (II) and HCO<sub>2</sub>H in an ultrafilter filled with a solution of II-reducing enzyme from *Streptococcus* sp. and a formic acid-dehydrogenating enzyme. Thus, a substrate solution (pH 6.5) containing II.Na, HCO<sub>2</sub>Na, HSCH<sub>2</sub>CH<sub>2</sub>OH, (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, and K sorbate was mixed with bovine serum albumin, II-reducing enzyme extracted from *Streptococcus faecalis* IFO 12964, formic acid-dehydrogenating enzyme from *Candida boidinii*, and polyacrylamide-bonded NAD, placed in an ultrafilter, and filtered with simultaneous addition of the substrate solution to produce ≥80% (73-94%) I for the first 8 days.

L17 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:64804 HCAPLUS  
DOCUMENT NUMBER: 104:64804  
TITLE: Influence of various factors on the stability of alcohol dehydrogenase  
AUTHOR(S): Mikelson, Z.; Mitrofanova, A. N.; Nikolaev, A. L.  
CORPORATE SOURCE: Mosk. Univ., Moscow, USSR  
SOURCE: Zhurnal Fizicheskoi Khimii (1985), 59(12), 3031-5  
CODEN: ZFKHA9; ISSN: 0044-4537  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

AB The effects of carriers, NAD, and glutaraldehyde on the thermal stability of alc. dehydrogenase from horse liver were investigated. The greatest stabilization was achieved on the surface of silica gel modified with albumin. Increasing the concentration of NAD to ≤6 + 10-4M increased the stability of the enzyme in the soluble state; further increases in NAD decreased alc. dehydrogenase stability. NAD destabilized enzyme adsorbed to silica gel. Glutaraldehyde did not stabilize alc. dehydrogenase adsorbed to albumin-coated silica gel at any concentration tested.

L17 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1985:484140 HCAPLUS  
DOCUMENT NUMBER: 103:84140

TITLE: Determination of body fluid indexes  
PATENT ASSIGNEE(S): Yatoron K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60066993	A2	19850417	JP 1983-174117	19830922 <--
JP 05060920	B4	19930903		

PRIORITY APPLN. INFO.: JP 1983-174117 19830922 <--  
AB In determination of body fluid indexes, especially enzymes, with a reaction mixture containing redox enzymes, electron transmitter (e.g., phenazine methosulfate), and reducible color-developing agent, possible errors from the endogenous and exogenous interfering substances present in the sample may be eliminated by reacting the sample in the absence of the enzyme substrate and reducible color-developing agent but in the presence of the redox enzymes and electron transmitter. Thus, for determination of  $\alpha$ -amylase in blood serum, 20  $\mu$ L serum sample was incubated with 2 mL of a reagent mixture containing ATP, NADP, m-phenazine methosulfate, MgCl<sub>2</sub>, hexokinase, glucose 6-phosphate dehydrogenase, glucoamylase, peroxidase, and bovine albumin in a 100 mM citrate buffer (pH 8.2) at 37° for 5 min, and incubated at 37° for 5 min in the presence of a reagent mixts. containing Na bathophenanthroline sulfonate and Na starch glycholate in a 200 mM triethanolamine buffer (pH 7.0) and ammonium ferrisulfonate and citrate in a 50 mM triethanolamine buffer (pH 6.6). The reaction was terminated by the addition of a 0.1M triethanolamine buffer (pH 6.6) containing oxalate and EDTA and the absorbance measured at 535 nm to obtain the activity of  $\alpha$ -amylase in the sample.

L17 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:608470 HCAPLUS

DOCUMENT NUMBER: 99:208470

TITLE: Studies on the phenazine methosulfate-tetrazolium salt capture reaction in NAD(P)-dependent dehydrogenase cytochemistry. I. Localization artefacts caused by the escape of reduced coenzyme during cytochemical reactions for NAD(P)-dependent dehydrogenases

AUTHOR(S): Raap, A. K.; Van Hoof, G. R. M.; Van Duijn, P.

CORPORATE SOURCE: Dep. Histochem. Cytochem., State Univ. Leiden, Leiden, 2333 AL, Neth.

SOURCE: Histochemical Journal (1983), 15(9), 861-79

CODEN: HISJAE; ISSN: 0018-2214

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The correct localization of oxidative enzymes using cytochem. tetrazolium methods, in which low-mol.-weight electron carriers such as NAD(P)H and reduced phenazine methosulfate (PMSH) are used, can be endangered by the escape to the reduced intermediates before they react to form the insol. formazan at the true enzyme-containing sites. To investigate this phenomenon, the glucose 6-phosphate dehydrogenase reaction was studied in fixed erythrocytes which, because of their microscopic dimensions, are well-suited for studying the loss of

intermediates. A mixture of active and heat-inactivated fixed erythrocytes was incubated in a PMS-supplemented medium for glucose 6-phosphate dehydrogenase. The cytophotometric histograms showed that the final formazan precipitate was equally distributed over both active and inactivated cells. When bovine serum albumin was added to the medium, all the formazan was bound to this protein and erythrocytes remained essentially unstained. The false localization in this system could be explained by an unfavorable balance between the capture of electrons carried by NADPH within the erythrocyte and the diffusion of NADPH out of the erythrocyte. The rate constant of NADPH oxidation was determined, as was the diffusion constant of NADPH in a protein matrix. Substituting the data obtained into formulas derived from the enzyme cytochem. localization theory of S. J. Holt and D. G. O'Sullivan (1958), it was calculated that the capture reaction was highly deficient. Theor., <1% of the total amount of formazan produced was localized within the erythrocyte, which explains the false localization observed. Implications the cytochem. demonstration of NAD (P)-dependent dehydrogenases in cells and electrophoresis are briefly discussed.

L17 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1981:116591 HCAPLUS

DOCUMENT NUMBER: 94:116591

TITLE: 17 $\beta$ -Estradiol dehydrogenase from chicken liver

AUTHOR(S): Renwick, Alistair G. C.; Soon, Choong Yee; Chambers, Susan M.; Brown, Colin R.

CORPORATE SOURCE: Dep. Biochem., Univ. Auckland, Auckland, N. Z.

SOURCE: Journal of Biological Chemistry (1981), 256(4), 1881-7

CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: English

AB NADP-linked 17 $\beta$ -estradiol dehydrogenase has been purified 300- to 400-fold from cell-free exts. of chicken liver in 20-30% yield by (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> precipitation, ion-exchange chromatog., and gel filtration. The enzyme is stable for at least 3 mo when stored at -20° in buffer containing glycerol (50%). Two forms, with mol. wts. of 43,000 and 97,000, are present; these show 1 major band (R<sub>m</sub> = 0.27) and one minor band (R<sub>m</sub> = 0.25) on polyacrylamide disc gel electrophoresis. R<sub>m</sub> is defined as the ratio of the distance migrated by the protein band to that of the tracking dye. The species of lower mol. weight is the more active, with apparent K<sub>m</sub> values for 17 $\beta$ -estradiol of 25 and 17.3  $\mu$ M in the presence and absence, resp., of bovine serum albumin in the assay medium. The apparent K<sub>m</sub> for NADP is 7.7  $\mu$ M, and the optimum pH for dehydrogenation is 9.9. The lower mol. weight form has a  $\lambda$ <sub>max</sub> at 280 nm, a shoulder at 290 nm, and an Alcml% of 12.1 at 280 nm. The fluorescence spectrum corresponds to that of a tryptophan-containing protein with  $\lambda$ <sub>max</sub> at 288 nm. Isoelec. focusing in gel at pH 5-8 shows 3 major bands of pI 6.9, 6.8, and 6.0. Crosslinking with di-Me suberimidate followed by electrophoresis reveals 5 bands. The enzyme is affected by SH-group reagents and possesses no associated estradiol-sensitive transhydrogenase activity.

=&gt; d que stat 119

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L6      1 SEA FILE=REGISTRY ABB=ON  ALBUMINS/CN
L7      173033 SEA FILE=HCAPLUS ABB=ON  (L6 OR ?ALBUMIN?)
L8      739 SEA FILE=HCAPLUS ABB=ON  L7 AND (?ELECTRON?(W)?ACCEPT? OR NAD
      OR NADP)
L9      378 SEA FILE=HCAPLUS ABB=ON  L8 AND ?ENZYME?
L10     6 SEA FILE=HCAPLUS ABB=ON  L9 AND ?DEHYDROGENATION?
L11     282 SEA FILE=HCAPLUS ABB=ON  L9 AND ?HYDROGEN?
L12     282 SEA FILE=HCAPLUS ABB=ON  L10 OR L11
L13     3 SEA FILE=HCAPLUS ABB=ON  L12 AND ?COLOR?(W) (?FORM? OR ?DEVELOP?
      )
L14     171 SEA FILE=HCAPLUS ABB=ON  L12 AND (?HUMAN? OR MAN OR ?BOVINE?
      OR COW?)
L15     2 SEA FILE=HCAPLUS ABB=ON  L14 AND ?TETRAZOLIUM?(W)?SALT?
L16     9 SEA FILE=HCAPLUS ABB=ON  L10 OR L13 OR L15
L18     12 SEA L16
L19     6 DUP REMOV L18 (6 DUPLICATES REMOVED)

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=&gt; d ibib abs 119 1-6

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L19 ANSWER 1 OF 6      MEDLINE on STN      DUPLICATE 1
ACCESSION NUMBER: 95366763      MEDLINE
DOCUMENT NUMBER: PubMed ID: 7639524
TITLE: Short-chain 3-hydroxy-2-methylacyl-CoA dehydrogenase from
      rat liver: purification and characterization of a novel
      enzyme of isoleucine metabolism.
AUTHOR: Luo M J; Mao L F; Schulz H
CORPORATE SOURCE: Department of Chemistry, City College of the City
      University of New York, New York 10031, USA.
CONTRACT NUMBER: HL 18089 (NHLBI)
      HL 30847 (NHLBI)
      RR 03060 (NCRR)
SOURCE: Archives of biochemistry and biophysics, (1995 Aug 1) Vol.
      321, No. 1, pp. 214-20.
      Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199509
ENTRY DATE: Entered STN: 21 Sep 1995
      Last Updated on STN: 3 Feb 1997
      Entered Medline: 11 Sep 1995
AB Short-chain L-3-hydroxy-2-methylacyl-CoA dehydrogenase (SC-HMAD), a
      soluble mitochondrial enzyme, was purified 6000-fold from rat
      liver in 6% yield by a six-step purification procedure. The purified
      enzyme was homogenous as judged by gel electrophoresis in the
      presence of sodium dodecyl sulfate. The molecular mass of this protein
      was estimated to be 28 kDa under denaturing conditions. Under
      nondenaturing conditions, the enzyme behaved on Sephacryl S-200
      like serum albumin with a molecular mass of 66 kDa. Thus,
      SC-HMAD seems to be a dimer composed of two, most likely identical 28-kDa
      subunits. Immunoblotting with antibodies to pig heart L-3-hydroxyacyl-CoA
      dehydrogenase (HAD) (EC 1.1.1.35) revealed that SC-HMAD and HAD are
      immunologically unrelated proteins. SC-HMAD, but not HAD, catalyzes the
      NAD(+)-dependent dehydrogenation of L-3-hydroxy-2-
      methylbutyryl-CoA, a metabolite of isoleucine, to 2-methylacetoacetyl-CoA.
      Relative activities with 3-hydroxy-2-methylacyl-CoA thioesters having acyl
      chains with 4, 5, 10, and 16 carbon atoms are 88, 100, 16, and 0%,
      respectively. Unbranched 3-hydroxyacyl-CoA thioesters are also substrates

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of SC-HMAD, although poorer ones as evidenced by apparent  $K_m$  values of 5 and 19  $\mu\text{M}$  for L-3-hydroxy-2-methylbutyryl-CoA and L-3-hydroxybutyryl-CoA, respectively. Maximal velocities observed with these two substrates were similar. It is concluded that SC-HMAD catalyzes the second dehydrogenation step during the beta-oxidation of the isoleucine metabolite 2-methylbutyryl-CoA. This enzyme may also be involved in the beta-oxidation of natural and xenobiotic branched chain carboxylic acids.

L19 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 DUPLICATE 2  
 ACCESSION NUMBER: 1991:345813 BIOSIS  
 DOCUMENT NUMBER: PREV199192045188; BA92:45188  
 TITLE: COENZYME F-420 DEPENDENT N-5 N-10  
 METHYLENETETRAHYDROMETHANOPTERIN DEHYDROGENASE IN METHANOL  
 GROWN METHANOSARCINA-BARKERI.  
 AUTHOR(S): ENSSLE M [Reprint author]; ZIRNGIBL C; LINDER D; THAUER R K  
 CORPORATE SOURCE: LABORATORIUM FUER MIKROBIOLOGIE, FACHBEREICH BIOLOGIE,  
 PHILIPPS-UNIVERSITAET, KARL-VON-FRISCH-STRASSE, W-3550  
 MARBURG, WEST GERMANY  
 SOURCE: Archives of Microbiology, (1991) Vol. 155, No. 5, pp.  
 483-490.  
 CODEN: AMICCW. ISSN: 0302-8933.  
 DOCUMENT TYPE: Article  
 FILE SEGMENT: BA  
 LANGUAGE: ENGLISH  
 ENTRY DATE: Entered STN: 31 Jul 1991  
 Last Updated on STN: 11 Sep 1991  
 AB The dehydrogenation of N5, N10-methylene tetrahydromethanopterin  
 ( $\text{CH}_2 = \text{H4MPT}$ ) to N5, N10-methenyltetrahydromethanopterin ( $\text{CH} = \text{H4MPT}^+$ ) is an intermediate step in the oxidation of methanol to  $\text{CO}_2$  in  
 Methanosarcina barkeri. The reaction is catalyzed by  $\text{CH}_2 = \text{H4MPT}$   
 dehydrogenase, which was found to be specific for coenzyme F420  
 as electron acceptor; neither NAD,  
 NADP nor viologen dyes could substitute for the 5-deazaflavin.  
 The dehydrogenase was anaerobically purified almost 90-fold to apparent  
 homogeneity in a 32% yield by anion exchange chromatography on DEAE  
 Sepharose and Mono Q HR, and by affinity chromatography on Blue Sepharose.  
 Sodium dodecyl sulfate/polyacrylamide gel electrophoresis revealed only  
 one protein band with an apparent mass of 31 kDa. The apparent molecular  
 mass of the native enzyme determined by polyacrylamide gradient  
 gel electrophoresis was 240 kDa. The ultraviolet/visible spectrum of the  
 purified enzyme was almost identical to that of albumin  
 suggesting the absence of a chromophoric prosthetic group. Reciprocal  
 plots of the enzyme activity versus the substrate concentrations  
 were linear: the apparent  $K_m$  for  $\text{CH}_2 = \text{H4MPT}$  and for coenzyme  
 F420 were found to be 6  $\mu\text{M}$  and 25  $\mu\text{M}$ , respectively.  $V_{\text{max}}$  was 4,000  
 $\mu\text{mol min}^{-1} \cdot \text{mg}^{-1}$  protein ( $k_{\text{cat}} = 2,066 \text{ s}^{-1}$ ) at pH 6 (the pH  
 optimum) and 37°C. The Arrhenius activation energy was 40 KJ/mol.  
 The N-terminal amino acid sequence was found to be 50% identical with that  
 of the F420-dependent  $\text{CO}_2 = \text{H4MPT}$  dehydrogenase isolated from  $\text{H}_2/\text{CO}_2$  grown  
 Methanobacterium thermoautotrophicum.

L19 ANSWER 3 OF 6 MEDLINE on STN DUPLICATE 3  
 ACCESSION NUMBER: 84031689 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 6629852  
 TITLE: Studies on the phenazine methosulphate-tetrazolium  
 salt capture reaction in NAD  
 (P)+-dependent dehydrogenase cytochemistry. I.  
 Localization artefacts caused by the escape of reduced co-

enzyme during cytochemical reactions for  
NAD(P)+-dependent dehydrogenases.  
AUTHOR: Raap A K; Van Hoof G R; Van Duijn P  
SOURCE: The Histochemical journal, (1983 Sep) Vol. 15, No. 9, pp.  
861-79.  
Journal code: 0163161. ISSN: 0018-2214.  
PUB. COUNTRY: ENGLAND: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 198312  
ENTRY DATE: Entered STN: 19 Mar 1990  
Last Updated on STN: 3 Feb 1997  
Entered Medline: 17 Dec 1983

AB The correct localization of oxidative enzymes using cytochemical  
tetrazolium methods, in which low molecular weight electron carriers such  
as NAD(P)H and reduced phenazine methosulphate (PMSH) are used,  
can be endangered by the escape of the reduced intermediates before they  
react to form the insoluble formazan at the true enzyme  
-containing sites. To investigate this phenomenon, the  
glucose-6-phosphate dehydrogenase reaction was studied in fixed  
erythrocytes which, because of their microscopic dimensions, are  
well-suited for studying the loss of intermediates. A mixture of active  
and heat-inactivated fixed erythrocytes was incubated in a  
PMS-supplemented medium for glucose-6-phosphate dehydrogenase.  
The cytophotometric histograms showed that the final formazan precipitate  
was equally distributed over both active and inactivated cells. When  
bovine serum albumin was added to the medium, all the  
formazan was found to be bound to this protein and the erythrocytes  
remained essentially unstained. The false localization in this system  
could be explained by an unfavourable balance between the capture of  
electrons carried by NADPH within the erythrocyte and the diffusion of  
NADPH out of the erythrocyte. The rate constant of NADPH oxidation was  
determined, as was also the diffusion constant of NADPH in a protein  
matrix. Substituting the data obtained into formulae derived from the  
enzyme cytochemical localization theory of Holt & O'Sullivan  
(1958), it was calculated that the capture reaction was highly deficient  
and, theoretically, less than 1% of the total amount of formazan produced  
was localized within the erythrocyte which explains the false localization  
observed. The importance of these findings for the cytochemical  
demonstration of NAD(P)+-dependent dehydrogenases in  
cells and electropherograms is briefly discussed.

L19 ANSWER 4 OF 6 MEDLINE on STN DUPLICATE 4  
ACCESSION NUMBER: 81117276 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 6936398  
TITLE: Estradiol-17 beta dehydrogenase from chicken liver.  
AUTHOR: Renwick A G; Soon C Y; Chambers S M; Brown C R  
SOURCE: The Journal of biological chemistry, (1981 Feb 25) Vol.  
256, No. 4, pp. 1881-7.  
Journal code: 2985121R. ISSN: 0021-9258.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 198104  
ENTRY DATE: Entered STN: 16 Mar 1990  
Last Updated on STN: 3 Feb 1997  
Entered Medline: 21 Apr 1981

AB NADP+-linked estradiol-17 beta dehydrogenase has been purified

300- to 400-fold from cell-free extracts of chicken liver in a 20 to 30% yield by ammonium sulfate precipitation, ion exchange chromatography, and gel filtration. The enzyme is stable for at least 3 months when stored at -20 degrees C in buffer containing glycerol (50%, v/v). Two forms, with molecular weights of 43,000 and 97,000 are present; these show one major band ( $R_m = 0.27$ ) and one minor band ( $R_m = 0.25$ ) on polyacrylamide disc gel electrophoresis. ( $R_m$  is defined as the ratio of the distance migrated by the protein band to that of the tracking dye.) The species of lower molecular weight is the more active, with apparent  $K_m$  values for estradiol-17 beta of 25 and 17.3 microM in the presence and absence, respectively, of bovine serum albumin in the assay medium. The apparent  $K_m$  for NADP+ is 7.7 microM, and the optimum pH for dehydrogenation is 9.9. The lower molecular weight form has a lambda max at 280 nm, a shoulder at 290 nm, and an A 1% 1 cm of 12.1 at 280 nm. The fluorescence spectrum corresponds to that of a tryptophan-containing protein with lambda max at 288 nm. Isoelectric focusing in gel at pH 5 to 8 shows three major bands of pI 6.9, 6.8, and 6.0. Cross-linking with dimethyl suberimidate followed by electrophoresis reveals five bands. The enzyme is affected by thio reagents and possesses no associated estradiol-sensitive transhydrogenase activity.

L19 ANSWER 5 OF 6 MEDLINE on STN  
 ACCESSION NUMBER: 66031561 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 4378709  
 TITLE: Dehydrogenation of androsterone by purified  
 3-alpha-hydroxy steroid-dependent nicotinamide-adenine  
 dinucleotide (phosphate)-transhydrogenating enzyme  
 of rat liver.  
 AUTHOR: Pietruszko R; Baron D N  
 SOURCE: The Biochemical journal, (1965 Aug) Vol. 96, No. 2, pp.  
 557-66.  
 Journal code: 2984726R. ISSN: 0264-6021.  
 PUB. COUNTRY: ENGLAND: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 196601  
 ENTRY DATE: Entered STN: 1 Jan 1990  
 Last Updated on STN: 3 Feb 1997  
 Entered Medline: 8 Jan 1966

L19 ANSWER 6 OF 6 JAPIO (C) 2006 JPO on STN  
 ACCESSION NUMBER: 2004-061263 JAPIO  
 TITLE: METHOD AND REAGENT FOR DETERMINING SPECIFIC  
 CONSTITUENT IN BIOLOGICAL SAMPLE  
 INVENTOR: EBINUMA HIROYUKI; YUKI KUMIKO  
 PATENT ASSIGNEE(S): DAI ICHI PURE CHEM CO LTD  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2004061263	A	20040226	Heisei	G01N033-52

## APPLICATION INFORMATION

STN FORMAT: JP 2002-219222 20020729  
 ORIGINAL: JP2002219222 Heisei  
 PRIORITY APPLN. INFO.: JP 2002-219222 20020729  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 2004  
 AN 2004-061263 JAPIO



AB PROBLEM TO BE SOLVED: To provide a determination method and a reagent for determination that accurately determine a specific constituent for effectively avoiding the influence of hemoglobin when determining the specific constituent in the biological sample by allowing an enzyme having oxidation capability due to dehydrogenation to the specific substance or a substance deriving from the specific substance under the presence of an electron acceptor to operate on the biological sample containing hemoglobin.

SOLUTION: The measurement reagent containing albumin is used when allowing the enzyme having oxidation capability due to dehydrogenation to the specific constituent or the substance deriving from the specific constituent under the presence of an electron acceptor to operate on the biological sample containing hemoglobin, and measuring the reductant of the generated electron acceptor for determining the specific constituent in the biological sample. The albumin may preferably originate from humans or cattle.

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=&gt; d que stat 123

L6 1 SEA FILE=REGISTRY ABB=ON ALBUMINS/CN  
 L7 173033 SEA FILE=HCAPLUS ABB=ON (L6 OR ?ALBUMIN?)  
 L8 739 SEA FILE=HCAPLUS ABB=ON L7 AND (?ELECTRON?(W)?ACCEPT? OR NAD  
 OR NADP)  
 L9 378 SEA FILE=HCAPLUS ABB=ON L8 AND ?ENZYME?  
 L10 6 SEA FILE=HCAPLUS ABB=ON L9 AND ?DEHYDROGENATION?  
 L11 282 SEA FILE=HCAPLUS ABB=ON L9 AND ?HYDROGEN?  
 L12 282 SEA FILE=HCAPLUS ABB=ON L10 OR L11  
 L13 3 SEA FILE=HCAPLUS ABB=ON L12 AND ?COLOR?(W) (?FORM? OR ?DEVELOP?  
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 L14 171 SEA FILE=HCAPLUS ABB=ON L12 AND (?HUMAN? OR MAN OR ?BOVINE?  
 OR COW?)  
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 L16 9 SEA FILE=HCAPLUS ABB=ON L10 OR L13 OR L15  
 L20 633 SEA FILE=USPATFULL ABB=ON L16 AND (PRD<20040127 OR PD<20040127  
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 L21 558 SEA FILE=USPATFULL ABB=ON L20 AND (NAD OR NADP)  
 L22 100 SEA FILE=USPATFULL ABB=ON L21 AND ?DEHYDROGENAT?  
 L23 15 SEA FILE=USPATFULL ABB=ON L22 AND ?COLOR?(W) (?FORM? OR  
 ?DEVELOP?)

=&gt; d ibib abs 123 1-15

L23 ANSWER 1 OF 15 USPATFULL on STN

ACCESSION NUMBER: 2005:118212 USPATFULL

TITLE: Method of imparting disease resistance to plants by  
reducing polyphenol oxidase activities

INVENTOR(S): Hakimi, Salim M., Des Moines, IA, UNITED STATES  
 Krohn, Bradley M., Ballwin, MI, UNITED STATES  
 Stark, David M., Chesterfield, MI, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005101484	A1	20050512
APPLICATION INFO.:	US 2003-415759	A1	20011102 (10)
	WO 2001-US50427		20011102

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-245876P	20001103 (60) <--
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MONSANTO COMPANY, 800 N. LINDBERGH BLVD., ATTENTION: G.P. WUELLNER, IP PARALEGAL, (E2NA), ST. LOUIS, MO, 63167, US	
NUMBER OF CLAIMS:	30	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	5 Drawing Page(s)	
LINE COUNT:	1598	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method for enhancing a plant's  
 resistance to fungal diseases by reducing expression of polyphenol  
 oxidase (PPO). The present invention also relates to a method for  
 improving a potato plant's anti-bruising trait. By using antisense  
 technology to generate transgenic potato plants with tuber-specific  
 promoters, PPO can be reduced to a level at which the potato tubers  
 sufficiently increases its resistance to fungal disease symptoms  
 including late blight caused by *Phytophthora infestans*. Also provided  
 are certain novel combinations of promoters and PPO-derived sequences

which also provide improvements in tuber bruise susceptibility.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 2 OF 15 USPATFULL on STN

ACCESSION NUMBER: 2003:155381 USPATFULL

TITLE: Method for separating and assaying lipoprotein, an assembly for performing such a method, and a system including such an assembly

INVENTOR(S): Nakazato, Tokiya, Urawa, JAPAN

PATENT ASSIGNEE(S): Helena Laboratories Co., Ltd., Saitama, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6576106	B1	20030610	<--
APPLICATION INFO.:	US 2000-549925		20000414 (9)	

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1999-107258	19990414	<--
	JP 2000-107103	20000407	<--

DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Warden, Jill

ASSISTANT EXAMINER: Brown, Jennine

LEGAL REPRESENTATIVE: Venable, LLP, Frank, Robert J., Axelrod, Nancy J.

NUMBER OF CLAIMS: 36

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 12 Drawing Figure(s); 12 Drawing Page(s)

LINE COUNT: 1482

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for separating and assaying lipoprotein to determine a degree of modification of a predetermined component in a specimen of lipoprotein, comprising the step of: determining a distance "a" from an application point of the standard sample to a fraction corresponding to the predetermined lipoprotein using an electrophoretic pattern obtained by electrophoresis of a standard sample; determining a distance "b" from the application point of the specimen to a fraction corresponding to the predetermined lipoprotein using electrophoretic pattern obtained by electrophoresis of a specimen; comparing the distance "a" and the distance "b" to determine a relative mobility " $z(=b/a)$ " of the specimen to the standard sample, wherein the degree of modification of the predetermined component in the specimen being judged on the basis of the relative mobility "z".

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 3 OF 15 USPATFULL on STN

ACCESSION NUMBER: 2003:44768 USPATFULL

TITLE: Methods and compositions for the treatment of macular and retinal degenerations

INVENTOR(S): Travis, Gabriel H., Los Angeles, CA, UNITED STATES

PATENT ASSIGNEE(S): Board of Regents, The University of Texas System (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003032078	A1	20030213	<--
APPLICATION INFO.:	US 2001-885303	A1	20010619 (9)	

	NUMBER	DATE	
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PRIORITY INFORMATION:	US 2001-263837P	20010123 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Gina N. Shishima, Fulbright & Jaworski L.L.P., Suite 2400, 600 Congress Avenue, Austin, TX, 78701		
NUMBER OF CLAIMS:	53		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	7 Drawing Page(s)		
LINE COUNT:	7372		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			
AB	The present invention is a method for screening and identifying therapeutic agents for the treatment of macular or retinal degeneration. The candidate substances preferably reduces the activity of 11-cis-retinol dehydrogenase. In vitro and in vivo studies administering the inhibitor molecules to abcr knockout mice and analyzing for the inhibition of lipofuscin (A2E) accumulation are contemplated.		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 4 OF 15 USPATFULL on STN

ACCESSION NUMBER:	1999:75501 USPATFULL
TITLE:	Method for assaying sulfate-conjugated bile acid and therefore
INVENTOR(S):	Adachi, Kenichi, Uji, Japan Tazuke, Yasuhiko, Ashiya, Japan Tsukada, Yoji, Kyoto, Japan
PATENT ASSIGNEE(S):	Marukin Shoyu Co., Ltd., Kagawa, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
	-----	-----	-----	
PATENT INFORMATION:	US 5919644		19990706	<--
	WO 9723643		19970703	<--
APPLICATION INFO.:	US 1997-875983		19970821 (8)	
	WO 1996-JP3678		19961217	
			19970821	PCT 371 date
			19970821	PCT 102(e) date

	NUMBER	DATE	
	-----	-----	
PRIORITY INFORMATION:	JP 1995-333336	19951221	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Gitomer, Ralph		
LEGAL REPRESENTATIVE:	Knobbe, Martens, Olson & Bear, LLP		
NUMBER OF CLAIMS:	10		
EXEMPLARY CLAIM:	4		
NUMBER OF DRAWINGS:	12 Drawing Figure(s); 14 Drawing Page(s)		
LINE COUNT:	803		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			

AB In a method of quantifying sulfate-conjugated bile acid in a sample with  
bile acid sulfate sulfatase and a reductive system indicator, an  
2-(4-iodophenyl)-3-(4-nitrophenyl)-5-(2,4-disulfohenyl)-2H-tetrazolium  
salt is used as a reductive system indicator. Sulfate-conjugated bile  
acid can be quantified through a single reaction without complication.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 5 OF 15 USPATFULL on STN

ACCESSION NUMBER: 1998:82541 USPATFULL  
TITLE: Method for the determination of cast in urine  
INVENTOR(S): Carter, Jesse M., 9105 S. Rome Ave., Tampa, FL, United States 33606  
Smith, Jack V., 8505 42nd Ave. N., St. Petersburg, FL, United States 33709

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5780239		19980714	<--
APPLICATION INFO.:	US 1996-675386		19960702	(8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1994-347124, filed on 23 Nov 1994, now abandoned			
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Spiegel, Carol A.			
NUMBER OF CLAIMS:	1			
EXEMPLARY CLAIM:	1			
LINE COUNT:	1312			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Method for detecting casts in urine by measuring Tamm-Horsfall protein by solid and liquid phase reagents including a method for manufacturing a enzyme specific for Tamm-Horsfall protein which produces a detectable response in the presence of casts in urine.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 6 OF 15 USPATFULL on STN

ACCESSION NUMBER: 93:39895 USPATFULL  
TITLE: Method of using N-acetyl-2,3-Didehydroleucine acylase for the preparation of D- or L-tryptophyl glycine, D- or L-tryptophyl-D-methionine or L-tryptophyl-D-cysteine  
INVENTOR(S): Kula, Maria-Regina, Niederzier/Hambach, Germany, Federal Republic of  
Kittelmann, Matthias, Freiburg, Germany, Federal Republic of  
PATENT ASSIGNEE(S): Degussa Aktiengesellschaft, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5212069		19930518	<--
APPLICATION INFO.:	US 1992-870817		19920420	(7)
RELATED APPLN. INFO.:	Division of Ser. No. US 1990-472388, filed on 1 Feb 1990, now patented, Pat. No. US 5134073			

	NUMBER	DATE	
PRIORITY INFORMATION:	DE 1989-3903324	19890204	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Naff, David M.		
ASSISTANT EXAMINER:	Meller, Mike		
LEGAL REPRESENTATIVE:	Cushman, Darby & Cushman		
NUMBER OF CLAIMS:	1		
EXEMPLARY CLAIM:	1		
LINE COUNT:	975		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel N-Acetyl-2,3-didehydroaminoacid-acylase is obtained by cultivating *Zoogloea ramigera* DSM 4306. The new enzyme can be used in a coupled enzyme system with an L-Leucinedehydrogenase for the enzymatic conversion of N-Acetyl-2,3-didehydroleucine to L-Leucine, D- or L-tryptophylglycine to D- or L-tryptophaneamide and glycine, as well as other tryptophanedipeptides to tryptophaneamides and free amino acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 7 OF 15 USPATFULL on STN

ACCESSION NUMBER: 92:61850 USPATFULL

TITLE: Microbiologically produced N-acetyl-2,3-didehydroleucine acylase

INVENTOR(S): Kula, Maria-Regina, Niederzier/Hambach, Germany, Federal Republic of Kittelmann, Matthias, Freiburg, Germany, Federal Republic of

PATENT ASSIGNEE(S): Degussa Aktiengesellschaft, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5134073		19920728	<--
APPLICATION INFO.:	US 1990-472388		19900201 (7)	

	NUMBER	DATE	
PRIORITY INFORMATION:	DE 1989-3903324	19890204	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Robinson, Douglas W.		
ASSISTANT EXAMINER:	Meller, Mike		
LEGAL REPRESENTATIVE:	Cushman, Darby & Cushman		
NUMBER OF CLAIMS:	3		
EXEMPLARY CLAIM:	1		
LINE COUNT:	981		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel N-Acetyl-2,3-didehydroaminoacid-acylase is obtained by cultivating *Zoogloea ramigera* DSM 4306. The new enzyme can be used in a coupled enzyme system with an L-Leucinedehydrogenase for the enzymatic conversion of N-Acetyl-2,3-didehydroleucine to L-Leucine, D- or L-tryptophylglycine to D- or L- tryptophaneamide and glycine, as well as other tryptophanedipeptides to tryptophaneamides and free amino acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 8 OF 15 USPATFULL on STN

ACCESSION NUMBER: 92:34059 USPATFULL

TITLE: Chemiluminescence assay of in vivo inflammation

INVENTOR(S): Allen, Robert C., Little Rock, AR, United States

PATENT ASSIGNEE(S): EXOxEmis, Inc., San Antonio, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5108899		19920428	<--
APPLICATION INFO.:	US 1989-429105		19891031 (7)	

DOCUMENT TYPE: Utility  
 FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Kepplinger, Esther L.  
 ASSISTANT EXAMINER: Wortman, Donna C.  
 LEGAL REPRESENTATIVE: Christensen, O'Connor, Johnson & Kindness  
 NUMBER OF CLAIMS: 60  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 14 Drawing Figure(s); 6 Drawing Page(s)  
 LINE COUNT: 1611

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The presence or amount of in vivo inflammation of a patient is determined by comparing the extent of opsonin receptor expression in vivo on phagocytes of a patient with the maximum opsonin receptor expression inducible on phagocytes of the patient in vitro after stimulation with a receptor expression priming agent. Preferably, the in vivo state of inflammation of a patient is determined by contacting a first portion of a phagocyte containing biological sample from the patient with a opsonified oxidative metabolism stimulating agent capable of eliciting metabolic activation and with a chemiluminogenic substrate, contacting a second portion of the biological sample from the patient with an opsonin receptor expression priming agent, an opsonified oxidative metabolism stimulating agent capable of eliciting metabolic activation and a chemiluminogenic substrate, and then comparing the chemiluminescence response of the first and second portions of the sample as a measure of the immune response potential or state of inflammation of the patient. Phagocyte function is additionally quantitatively evaluated by measuring the phagocyte oxygenation capacity of a maximally opsonin receptor primed and stimulated biological sample of a patient, determining the specific oxygenation capacity per phagocyte in the sample, and comparing the specific oxygenation capacity to a set of controls representing the normal distribution of specific oxygenation established from testing a large population. The phagocyte-specific oxygenation capacity is determined by contacting the sample with an opsonin receptor expression priming agent, an opsonified oxidative metabolism stimulating agent and a chemiluminogenic substrate, measuring the chemiluminescence response of the sample, determining the chemiluminescence response per phagocyte of the sample and comparing the response per phagocyte with that of the normal range of values. Kits and reagents are provided for use in the practice of the disclosed methods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 9 OF 15 USPATFULL on STN

ACCESSION NUMBER: 91:90687 USPATFULL  
 TITLE: Integral multilayer analytical element  
 INVENTOR(S): Arai, Fuminori, Asaka, Japan  
 Igarashi, Takeshi, Asaka, Japan  
 Tanaka, Mitsutoshi, Asaka, Japan  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5063153		19911105	<--
APPLICATION INFO.:	US 1987-107674		19871009 (7)	
	NUMBER		DATE	
PRIORITY INFORMATION:	JP 1986-240288		19861009	<--
	JP 1986-265090		19861106	<--

JP 1986-265091 19861106 <--  
DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Nucker, Christine  
ASSISTANT EXAMINER: Scheiner, Laurie  
LEGAL REPRESENTATIVE: McAulay Fisher Nissen Goldberg & Kiel  
NUMBER OF CLAIMS: 8  
EXEMPLARY CLAIM: 1  
LINE COUNT: 964

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An improvement of a dry integral multilayer analytical element having functional layers which contain dehydrogenase, oxidized nicotinamide coenzyme, an electron transport compound and an electron acceptable dye-forming compound is disclosed. The improvement the analytical element resides in that an alkali agent or an alkaline buffer is contained in a layer which is different from a layer or layers containing the oxidized nicotinamide coenzyme and electron acceptable dye-forming compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 10 OF 15 USPATFULL on STN

ACCESSION NUMBER: 91:56845 USPATFULL  
TITLE: Color control system  
INVENTOR(S): Palmer, John L., Philadelphia, PA, United States  
Timmerman, Marsha W., Allentown, PA, United States  
PATENT ASSIGNEE(S): Enzymatics, Inc., Horsham, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5032506		19910716	<--
APPLICATION INFO.:	US 1986-942414		19861216 (6)	
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Kepplinger, Esther L.			
ASSISTANT EXAMINER:	Scheiner, Toni R.			
LEGAL REPRESENTATIVE:	Finnegan, Henderson, Farabow, Garrett & Dunner			
NUMBER OF CLAIMS:	61			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	14 Drawing Figure(s); 13 Drawing Page(s)			
LINE COUNT:	1486			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An assay system useful for the determination of NAD(P)H, NAD(P), or a substrate of an enzyme which reacts with the formation or consumption of NAD(P)H. Concentrations of organic substrates for example alcohol, cholesterol, uric acid, in a biological fluid such as saliva, blood or urine may be determined. The system includes a diaphorase which catalyzes a NAD(P)H-dependent reduction of a chromogen to cause a visible color change; this color change is indicative of the concentration sought to be determined. The system includes a chromogen which is a first substrate for the diaphorase which causes a color change when reduced by NAD(P)H, and a second substrate which is a competing substrate for the diaphorase; the competing substrate is irreversibly reduced by the diaphorase. The system is capable of measuring colorimetrically without dilution concentrations of organic compounds in biological fluids which previously could not be measured in such concentration. The system provides a convenient, practical sobriety test. The invention also provides a method for such determination and diagnostic kit.



CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 11 OF 15 USPATFULL on STN  
 ACCESSION NUMBER: 90:93094 USPATFULL  
 TITLE: Multi-layered element for quantitative analysis of  
 immuno reactant  
 INVENTOR(S): Sudo, Yukio, Asaka, Japan  
 Masuda, Nobuhito, Asaka, Japan  
 Miura, Kenji, Asaka, Japan  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S.  
 corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4975366		19901204	<--
APPLICATION INFO.:	US 1987-15916		19870218 (7)	

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1986-33988	19860220	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Hill, Jr., Robert J.		
LEGAL REPRESENTATIVE:	McAulay Fisher Nissen & Goldberg		
NUMBER OF CLAIMS:	24		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 2 Drawing Page(s)		
LINE COUNT:	1206		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A multi-layered element for the quantative analysis of an immuno-reactant having a water-impermeable and light-transmissible support layer; a coloring reagent layer carried by said support layer and containing a hydrophilic polymer as a binder; and a reaction layer covering said reagent layer and made of a porous matrix. When the analyte immunoreactant is an antigen, said reaction layer contains the specific antibody for the antigen, the antibody being immobilized by a first water-insoluble carrier. When the analyte immuno-reactant is an antibody, said reaction layer contains the specific antigen for the antibody. The reaction layer contains an enzyme substrate immobilized by a second water-insoluble carrier different from said first water-insoluble carrier. The coloring reagent layer contains a detection reagent composition for coupling with an enzymatic reaction product produced by the reaction between the enzyme-labelled complex of the immuno-reactant and the enzyme substrate immobilized by the second water-insoluble carrier. Upon coupling of the detection reagent composition with the enzymatic reaction product, a color is developed, the optical density of which is measured to determine the quantity of the analyte immuno-reactant contained in a liquid sample.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 12 OF 15 USPATFULL on STN  
 ACCESSION NUMBER: 90:75037 USPATFULL  
 TITLE: Assay for antigens by binding immune complexes to solid supports free of protein and non-ionic binders  
 INVENTOR(S): Milburn, Gary L., Sunnyvale, CA, United States  
 Rabbie, Judith, Palo Alto, CA, United States  
 Houts, Thomas M., Mountain View, CA, United States

PATENT ASSIGNEE(S): Syntex (U.S.A.) Inc., Palo Alto, CA, United States  
(U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4959303		19900925	<--
APPLICATION INFO.:	US 1987-135869		19871221	(7)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Spiegel, Jack			
LEGAL REPRESENTATIVE:	Leitereg, Theodore J.			
NUMBER OF CLAIMS:	79			
EXEMPLARY CLAIM:	1			
LINE COUNT:	1033			

AB Methods are disclosed for detecting an antigen in a biological sample. The methods involve providing in combination a solid support, which is substantially free of specific binding proteins, and a medium comprising an antigen from the sample and an antibody for the antigen. The combination is incubated under conditions sufficient for the antibody when bound to the antigen to bind to the support. The presence or amount of antibody on the support or in the medium is determined and is related to the presence of antigen in the sample. The methods have particular application to the detection of gram-negative bacteria.

L23 ANSWER 13 OF 15 USPATFULL on STN

ACCESSION NUMBER: 90:52814 USPATFULL  
TITLE: Oxidized coenzyme-containing dry analytical element  
INVENTOR(S): Arai, Fuminori, Asaka, Japan  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4939085		19900703	<--
APPLICATION INFO.:	US 1987-107673		19871009	(7)

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1986-240287	19861009	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Warden, Robert J.		
ASSISTANT EXAMINER:	Spiegel, Carol A.		
LEGAL REPRESENTATIVE:	McAulay Fisher Nissen & Goldberg		
NUMBER OF CLAIMS:	10		
EXEMPLARY CLAIM:	1		
LINE COUNT:	577		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A dry analytical element having functional layers which contain dehydrogenase, oxidized nicotinamide coenzyme, pyruvate, an electron transport compound and an electron acceptable dye-forming compound is disclosed. The improvement the analytical element resides in that the coenzyme and dye-forming compound are contained in one or two layers which are different from a layer containing pyruvate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 14 OF 15 USPATFULL on STN

ACCESSION NUMBER: 89:9265 USPATFULL

TITLE: Composition used for the determination of  
beta-hydroxybutyric acid and a method for preparing the  
said compositionINVENTOR(S): Shigeta, Yukio, Hyogo, Japan  
Harano, Yutaka, Shiga, Japan  
Yamada, Shigeki, Kyoto, Japan  
Takahaski, Yoshinori, Fukui, JapanPATENT ASSIGNEE(S): Kabushiki Kaisha Kyoto Daiichi Kagaku, both of, Japan  
(non-U.S. corporation)  
Kabushiki Kaisha Sanwa Kagaku Kenkyusho, both of, Japan  
(non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4803158		19890207	<--
APPLICATION INFO.:	US 1986-922178		19861023	(6)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1984-582059, filed on 21 Feb 1984, now abandoned			

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1983-39813	19830308	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Warden, Robert J.		
ASSISTANT EXAMINER:	Saunders, David A.		
LEGAL REPRESENTATIVE:	Darby & Darby		
NUMBER OF CLAIMS:	3		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 2 Drawing Page(s)		
LINE COUNT:	533		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to a composition for determining  
 $\beta$ -hydroxybutyric acid, usable for doctors, nurses, and patients  
themselves simply and quickly without use of special instruments, and  
also relates to a method for preparing the said composition.

The composition of the invention oxidizes  $\beta$ -hydroxybutyric acid under alkaline conditions and the presence of nicotineamide adenine dinucleotide (NAD) by  $\beta$ -hydroxybutyric acid dehydrogenase, and the produced reduction-type NAD (NADH) reduces tetrazolium salt through an electron carrier to produce formazan developing color. The composition permits accurate measurement quickly and simply, and has excellent conservative stability, because it is a uniform solid-phase composition prepared by applying reagents necessary for the reaction of film impermeable to water together with a natural or synthesized film forming polymer. The invention further provides a method for preparing the said composition by applying, on a supporter impermeable to water, W/O emulsion which is formed by dispersing alkaline buffer,  $\beta$ -hydroxybutyric acid dehydrogenase, NAD, electron carrier, and tetrazolium salt in an organic solvent insoluble in water together with a natural or synthesized film forming polymer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 15 OF 15 USPATFULL on STN

ACCESSION NUMBER: 77:25216 USPATFULL

TITLE: Determination of glutamate and glutamic transaminases  
INVENTOR(S): Stavropoulos, William S., Carmel, IN, United States  
Acuff, Kenneth J., Indianapolis, IN, United States  
PATENT ASSIGNEE(S): The Dow Chemical Company, Midland, MI, United States  
(U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4024021		19770517	<--
APPLICATION INFO.:	US 1975-575879		19750509	(5)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1973-380810, filed on 19 Jul 1973, now abandoned			
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Naff, David M.			
LEGAL REPRESENTATIVE:	Johnson, Maynard R.			
NUMBER OF CLAIMS:	3			
EXEMPLARY CLAIM:	1			
LINE COUNT:	420			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB     Glutamate and glutamic transaminases are determined by mixing a substrate-reagent composition that is essentially free of ammonia or ammonium ions with a specimen to be analyzed, incubating the resulting mixture for less than about 15 minutes, terminating incubation and measuring a color produced.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.